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OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER

O HERN, BRENT T

ART UNIT	PAPER NUMBER
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1794

NOTIFICATION DATE	DELIVERY MODE
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09/15/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com
oblonpat@oblon.com
jgardner@oblon.com

Office Action Summary	Application No. 10/530,480	Applicant(s) SUZUKI ET AL.	
	Examiner Brent T. O'Hern	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 August 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) 24-27 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 and 28-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims

1. Claims 1-31 are pending with claims 24-27 withdrawn and claims 30-31 new.

WITHDRAWN REJECTIONS

2. All rejections of the claims of record made by the Board in the Office action mailed 7/2/2009 and of record in the Office action mailed 9/4/2007 have been withdrawn due to Applicant's amendments in the Paper filed 8/28/2009. The Board only rejected independent claim 1 in the Office action mailed 7/2/2009.

NEW REJECTIONS

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office Action.

Claim Rejections - 35 USC § 103

4. Claims 1-20, 22-23 and 28-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsui et al. (US 6,841,261) in view of Applicant's admission of prior art at pages 2 and 3 and those locations noted below of the Specification (hereinafter referred to as "the admitted prior art") and Lind et al. (US 6,074,715) with evidence of Shiraki et al. (US 4,386,125). The Board identifies this admitted prior art at least at page 4 of the Board's Office action mailed 7/2/2009.

Regarding claims 1, 6-8, 13 and 14, Matsui ('261) teaches a heat shrinkable crystalline film comprising a resin composition (*See col. 1, ll. 6-23 and col. 14, ll. 14-63.*) comprising the following components (A) and (B) obtained by orientation at least in monoaxial direction (*See col. 2, ll. 56-60 and col. 5, ll. 22-44, oriented film with*

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components (A) and (B). See col. 17, ll. 28-38 where Matsui ('261) teaches orienting the film uniaxially, biaxially or multi-axially.),

(A) 50 to 95 mass % of a block copolymer comprising an aromatic vinyl compound and a conjugated diene in a proportion of the aromatic vinyl compound of from 50 to 90 mass % (*See col. 8, l. 64 to col. 9, l. 45 wherein the block copolymer comprises an aromatic vinyl compound and a conjugated diene and wherein the conjugated diene with a weight percentage of 5 to 40% provides for said aromatic compound concentration.*), and

having a micro phase separation structure comprising a soft phase and a hard phase (*See col. 8, l. 64 to col. 10, l. 51 wherein the structure clearly has a microphase separation structure with soft/hard phase regions wherein the styrene regions correspond to the hard phase and the non-styrene regions correspond to the soft phase.*), and

(B) 5 to 50 mass % of a crystalline styrene type polymer, which a syndiotactic structure is a member thereof (*See col. 14, l. 32 to col. 15, l. 16 and col. 9, ll. 28-63 wherein (B) includes styrene type polymers as in (A), such as styrene, o-methylstyrene, p-methylstyrene, high-impact styrene or other styrene-type components, which can exhibit a syndiotactic structure, having the above concentration.*). Syndiotactic structures of this type/amount are known to be crystalline due to the syndiotactic nature of the material.

Matsui ('261) teaches that the polystyrene may be used together in order to increase the rigidity of the obtained film, a high-impact polystyrene may be used together with a purpose of improving blocking properties (*See col. 14, ll. 59-62.*).

Matsui ('261) teaches "In the present invention, the amount of the vinyl aromatic hydrocarbon polymer (B1) to (B3) is preferably at most 100 parts by weight of the block copolymer (A) Further, in a case where the vinyl aromatic hydrocarbon polymer (B1) is an opaque high-impact polystyrene, its amount is at most 20 parts by weight" (*See col. 15, l. 64 - col. 16, l. 10.*).

Matsui ('261) exemplifies forming block copolymers in processes identical to or substantially identical to Applicant's Specification Examples 2 through 8, which according to Applicant, are responsible for the formation of the claimed micro phase separation structure having soft and hard phases (*Compare pages 46-54 and 65 of Applicant's Specification with col. 26, reference Examples 20 and 21 of Matsui ('261).*).

Matsui ('261) fails to expressly disclose wherein the film has a heat shrinkage ratio at 80 °C for 10 seconds of at least 20%, wherein the styrene type polymer has a syndyotactic structure.

Matsui ('261) teaches a material as discussed above which generically includes such a syndyotactic structure (*See col. 14, l. 32 to col. 15, l. 16 and col. 9, ll. 28-63. Applicant does not dispute this position as illustrated at page 2 of Applicant's Reply Brief filed 5/1/2008.*).

Applicant's acknowledge that the use of a polystyrene type polymer having a syndyotactic structure in forming a heat shrinkable film was well known at the time of

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Applicant's invention (*See p. 2, l. 8 to p. 3, l. 1 of Applicant's Specification.* Syndiotactic structures of this type/amount are known to be crystalline due to the syndiotactic nature of the material.).

Applicants acknowledge that using a styrene polymer having a syndiotactic structure, together with a styrene/diene type block copolymer, to form a multilayered oriented laminated film was well known at the time of the invention (*See p. 3, ll. 2-8 of Applicant's Specification.*).

Applicants acknowledge that specific ranges of the melting point and the crystallization temperature were known to be important in forming the film discussed above (*See p. 3, ll. 8-16 of Applicant's Specification.*).

As stated in KSR, 550 U.S. at 416: "that when a patent claims a structure already known in the prior art that is altered by the mere substitution of one element for another known in the field, the combination must do more than yield a predictable result".

The admitted prior in Applicant's Specification may be used in determining patentability of the claimed invention (*See In re Nomiya*, 509 F.2d 566, 571, 184 USPQ 607, 611 (CCPA 1975); *In re Davis*, 305 F.2d 501, 503 (CCPA 1962).)

Matsui ('261) teaches forming a heat shrinkable (multilayer) film containing the claimed amount of at least one block copolymer having a vinyl aromatic hydrocarbon and a conjugated diene in the claimed proportion and claimed amount of a vinyl aromatic hydrocarbon polymer (corresponding to the claimed styrene type polymer), such as polystyrene or a high-impact polystyrene. Matsui ('261) teaches at col. 10, ll. 5-13 (emphasis added)

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“[T]he molecular weight and the molecular structure of the copolymer in the present invention can be controlled depending upon the purpose, by optionally changing the charge amount, *the timing of addition and the number of addition of the monomers*, the polymerization initiator, the randomizing agent, and the proton donating substance used for deactivation of active terminals (hereinafter referred to as “polymerization terminator”).

Consistent with the above disclosure, Reference examples 20 and 21 of Matsui ('261) produce block copolymers using the same timing and number of addition of the same monomers used in the Applicant's Specification Examples 2 through 8 in the presence of the polymerization initiator (catalyst) and solvent used in Applicant's Specification Examples 2 through 8 as the same temperature employed in Applicant's Specification Examples 2 through 8. These block copolymers, according to pages 45 to 54 and 65 of Applicant's Specification, contain the claimed microphase separation structure having soft and hard phases.

Matsui ('261) teaches that the heat shrinkable film may be obtained by extruding a film and orienting the film uniaxially, biaxially or multi-axially (corresponding to the claimed requirement of orienting the film with at least a monoaxial direction). Matsui ('261) also teaches that “when such a film is used as a heat shrinkable label or a packaging material, the heat shrinkage factor is at least 15% at 80 °C (See *col. 17, ll. 43-50.*). Further, Matsui ('261) exemplifies a heat shrinkable film having a heat shrinkage factor of greater than or equal to 20% at 80 °C for 30 seconds (See *cols. 35-36 and Table 1.*).

Furthermore, see col. 7, l. 40 to col. 8, l. 1 of Shiraki et al. (US 4,386,125), as evidence, wherein the heat shrinkage factor is calculated by the cited equation:

$$\text{Heat shrinkage factor (\%)} = \underline{(1 - I') * 100}$$

I

Furthermore, it is noted that for an initial length of 100 and a final length of 80, both the heat shrinkage ratio, per Applicant's equation on p. 59, lines 4-9, and the heat shrinkage factor, per the above equation are 20%. Thus, the Examiner interprets "heat shrinkage ratio" and the "heat shrinkage factor" to be equivalent. Furthermore, it is noted that Shiraki et al. (US 4,386,125) states that it is desirable for the heat shrinkage factor for heat shrinkable films to be at least 15% at 80 °C for the purpose of providing long-term thermal and mechanical resilient films (*See col. 7, l. 40 to col. 8, l. 1.*).

Therefore, Matsui's ('261) film obviously teaches a heat shrinkage ratio at 80 °C for 10 seconds of at least 20% in order to satisfy the mechanical performance of the applied film.

As discussed above, Matsui ('261) does not expressly mention that its' styrene type polymer has a syndiotactic structure and Applicant does not expressly dispute that Matsui ('261) generically teaches such. Furthermore, as discussed above, Applicant acknowledges that the use of a polystyrene type polymer having a syndiotactic structure in forming a heat shrinkable film was well known at the time of Applicant's invention. Applicant acknowledges that using a styrene polymer having a syndiotactic structure, together with a styrene/diene type block copolymer, to form a multilayered oriented laminated film was well known at the time of the invention.

Lind ('715) teaches a styrene-type polymer in a multilayer heat shrinkable film having a syndiotactic polystyrene structure (*See col. 5, l. 58 to col. 6, l. 25.*) for the purpose of providing a styrene-type structure having a strong structure and narrow

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molecular weight distribution which provides for narrow crystalline and melting point ranges (*See col. 3, l. 44 to col. 4, l. 22 and col. 5, l. 58 to col. 6, l. 25.*).

Therefore, given the above teachings, one of ordinary skill in the art would have been led to employ a conventional polystyrene polymer having well known syndiotactic structure as the styrene polymer of Matsui's ('261), resin composition containing a styrene/diene block copolymer and styrene polymer, with a reasonable expectation of successfully forming a strong heat shrinkable film.

The phrase "(C) 0 to 45 mass % of a non-crystalline styrene type polymer different from the components (A) and (B)" in claim 1, lines 10-11 is interpreted as not limiting since "(C)" can be 0%.

The phrases "wherein component (C) is present and comprises a styrene type polymer having a random copolymer block portion of an aromatic vinyl compound and a conjugated diene in its structure" in claim 6, lines 2-4; "wherein component (C) is present and comprises a rubber-modified polystyrene containing dispersed rubber particles having a volume average particle size of at most 2 μm " in claim 7, lines 2-4; and "wherein component (C) is present and comprises a styrene type polymer having a random copolymer structure of styrene and a meth(acrylate) in its structure" in claim 8, lines 2-3 are interpreted as not limiting since "(C)" can be 0% per claim #1 and Applicant has not definitely defined and non-0% value for (C).

The phrase "wherein no holes of 1 mm or larger are confirmed after the film is left at rest on a hot plate of 120 °C for 120 seconds so that the film and the hot plate are in

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contact with each other” in claim 13, lines 2-3 are interpreted as obvious properties of the prior art since the composition and method of making are the same.

Regarding claim 2, Matsui ('261) teaches a film wherein the block copolymer as the component (A) has a random copolymer block portion of the aromatic vinyl compound and the conjugated diene in its structure (*See col. 9, l. 28 to col. 10, l. 51 wherein a randomizing agent provides for said structure.*).

Regarding claim 3, Matsui ('261) teaches a film wherein the component (A) has the following characteristics:

(1) the loss tangent ($\tan \delta$) has one or more maximum values within a temperature range of at least 65 °C and less than 100 °C in the dynamic visco elasticity spectrum (*See col. 3, ll. 19-31.*),

(2) the highest value of the maximum values corresponding to (1) is within a range of at least 1.5 and less than 4.0 (*See col. 3, ll. 32-37.*),

(3) the loss tangent at a temperature lower by 10 °C than the temperature for the highest maximum value among the maximum values corresponding to (1), is at most 40% of the highest maximum value (*See col. 36, Table 1, wherein said values are provided for.*),

(4) the loss tangent at a temperature lower by 30 °C than the temperature for the highest maximum value among the maximum values corresponding to (1), is at most 10% of the highest maximum value (*See col. 36, Table 1, wherein said values are provided for.*), and

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(5) the loss tangent at 30 °C is within a range of at least 0.01 and less than 0.4
(See col. 36, Table 1, wherein said values are provided for.).

Regarding claim 4, Matsui ('261) teaches a film wherein the resin composition constituting the heat shrinkable film has the following characteristics:

(1) the loss tangent ($\tan \delta$) has one or more maximum values within a temperature range of at least 65 °C and less than 100 °C in the dynamic viscoelasticity spectrum (See col. 3, ll. 19-31.),

(2) the highest value of the maximum values corresponding to (1) is within a range of at least 1.5 and less than 4.0 (See col. 3, ll. 32-37.),

(3) the loss tangent at a temperature lower by 10 °C than the temperature for the highest maximum value among the maximum values corresponding to (1), is at most 40% of the highest maximum value (See col. 36, Table 1, wherein said values are provided for.),

(4) the loss tangent at a temperature lower by 30 °C than the temperature for the highest maximum value among the maximum values corresponding to (1), is at most 10% of the highest maximum value (See col. 36, Table 1, wherein said values are provided for.), and

(5) the loss tangent at 30 °C is within a range of at least 0.01 and less than 0.4
(See col. 36, Table 1, wherein said values are provided for.).

Regarding claim 5, Matsui ('261), the admitted prior art and Lind ('715) teach the film discussed above, however, fail to expressly disclose a film having a spontaneous shrinkage ratio at 40 °C for 7 days of at most 5%.

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However, Matsui ('261) teaches a spontaneous shrinkage factor, which is the same as spontaneous shrinkage ratio, that is less than 2% for 30 days, thus, it would have been obvious to a person having ordinary skill in the art at the time of Applicant's invention that said shrinkage factor would be less than 5% for 7 days in order to provide a film that has a desirable appearance (*See col. 1, ll. 6-23 and col. 2, ll. 43-50*).

Regarding claim 9, Matsui ('261), the admitted prior art and Lind ('715) teach the styrene type polymer having a syndiotactic structure as the component (B) discussed above, however, fail to expressly disclose a crystalline melting point within a range of from 160 °C to 260 °C, and a crystalline melting energy of at least 1 J/g.

However, it would have been obvious, to a person having ordinary skill in the art at the time of Applicant's invention that Matsui's ('261) modified structure with the same composition would also be configured to have the same melting points and melting energy in order to provide a film that has a desirable appearance (*See col. 1, ll. 6-23 and col. 2, ll. 43-50*).

Regarding claim 10, Matsui ('261), the admitted prior art and Lind ('715) teach the film discussed above, however, fail to expressly disclose a crystallinity of from 3 to 80% and a cold crystallization temperature of from 120 to 170 °C derived from the component (B).

However, it would have been obvious to a person having ordinary skill in the art at the time of Applicant's invention that Matsui's ('261) modified structure with the same composition would also be configured to have the same crystallinity and cold

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crystallization temperature in order to provide a film that has a desirable appearance (*See col. 1, ll. 6-23 and col. 2, ll. 43-50 of Matsui ('261).*).

Regarding claim 11, Matsui ('261), the admitted prior art and Lind ('715) teach the film discussed above, however, fails to expressly disclose a film having an internal haze of at most 30%.

However, it would have been obvious to a person having ordinary skill in the art at the time of Applicant's invention that Matsui's ('261) modified structure with the same composition and method of making would also be configured to have the same internal haze in order to provide a film with a desirable appearance (*See col. 1, ll. 6-23 and col. 2, ll. 43-50.*).

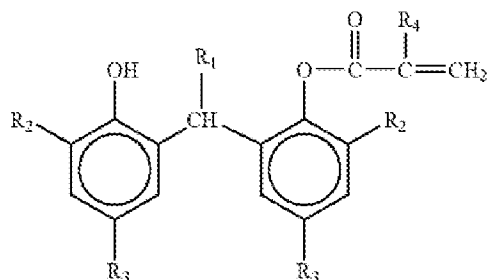
Regarding claim 12, Matsui ('261), the admitted prior art and Lind ('715) teach the film discussed above, however, fail to expressly disclose wherein the ratio of the relaxation stresses in the orientation direction of the film and in a direction at right angles therewith, is from 1.2 to 10.

However, it would have been obvious to one having ordinary skill in the art at the time of Applicant's invention that Matsui's ('261) modified structure having the same composition and made in the same way as claimed would also have the above ratio so as to provide a film that does not wrinkle when applied to the substrate and has a desirable appearance (*See col. 1, ll. 6-23 and col. 2, ll. 43-50.*).

Regarding claim 15, Matsui ('261), the admitted prior art and Lind ('715) teach the film discussed above, however, fail to expressly disclose wherein an (meth)acrylate type compound (D) represented by the following formula in an amount of from 0.1 to 3

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parts by mass per 100 parts by mass of the total amount of the components (A), (B) and (C):



wherein R_1 represents hydrogen or a C_{1-3} alkyl, each of R_2 and R_3 which are independent of each other, represents a C_{1-9} alkyl, and R_4 represents hydrogen or methyl.

However, Matsui ('261) teaches a (meth)acrylate in the block copolymer composition with the above weight ratio (*See col. 5, ll. 35-44 and col. 14, ll. 45-55.*) for the purpose of improving processability and low temperature orientation properties while providing for improved mechanical performance, thermal stability and visual aesthetics (*See col. 1, ll. 6-23 and col. 14, ll. 63-65.*). This above material is a non obvious alternative stabilizer known in the art and obvious to substitute for other stabilizers. Furthermore, it would have been obvious to one having ordinary skill in the art to adjust the amount of (meth)acrylate to the above values for the intended application since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Therefore, it would have been obvious to use the above similar (meth)acrylate as taught by Matsui ('261) in order to provide a composite with improved processability, visual aesthetics, mechanical performance and low temperature orientation properties.

Regarding claim 16, Matsui ('261), the admitted prior art and Lind ('715) teach the film discussed above and Matsui ('261) teaches a film that contains a phosphorus type stabilizer (*See col. 16, ll. 23-36.*), however, fail to expressly disclose an amount of from 0.1 to 1 part by mass per 100 parts by mass of the total amount of the components (A), (B) and (C).

However, it would have been obvious to one having ordinary skill in the art to adjust the amount of stabilizer containing phosphorus to the above values for the intended application since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Furthermore, it would have been obvious, through routine optimization, to one having ordinary skill in the art to add from 0.1 to 1 part by mass stabilizer containing phosphorus per 100 parts by mass of the total amount of the components (A), (B) and (C) for the purpose of preserving the physical properties of the film (*See col. 16, ll. 17-26.*).

Regarding claim 17, Matsui ('261), the admitted prior art and Lind ('715) teach the film discussed above and Matsui ('261) teaches wherein the film contains a phenol type stabilizer (except the component (D)) (*See col. 16, l. 30.*), however, fails to

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expressly disclose an amount of from 0.1 to 1 part by mass per 100 parts by mass of the total amount of the components (A), (B) and (C).

However, it would have been obvious, through routine optimization, to one having ordinary skill in the art to add from 0.1 to 1 part by mass stabilizer containing phenol per 100 parts by mass of the total amount of the components (A), (B) and (C) for the purpose of preserving the physical properties of the film (*See col. 16, ll. 17-26.*). Furthermore, it would have been obvious to one having ordinary skill in the art to adjust the above amounts to the above values for the intended application since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Regarding claim 18, Matsui ('261) teaches wherein the film is an expanded product (*See col. 2, ll. 56-60 wherein the orientation provides an expanded product.*).

Regarding claim 19, Matsui ('261) teaches a film having a multilayer structure, which has at least one layer of the heat shrinkable film (*See col. 2, l. 43-50.*).

Regarding claim 20, Matsui ('261), the admitted prior art and Lind ('715) teach the film discussed above, however, fail to expressly disclose wherein at least one of the outermost layers is made of a resin composition containing at least one copolymer selected from a styrene/butadiene block copolymer, a styrene/isoprene block copolymer and a styrene/meth(acrylate) type copolymer.

However, Matsui ('261) teaches wherein the film is a heat shrinkable multilayer film made of the above composition (*See col. 2, ll. 43-50 and col. 9, ll. 28-41.*), therefore it would have been obvious that the layer be in the outermost position in order to

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provide a film with satisfactory strength and shrinkability properties (*See col. 2, ll. 38-42.*) as taught by Matsui ('261).

Regarding claim 22, Matsui ('261), the admitted prior art and Lind ('715) teach the film discussed above and Matsui ('261) teaches wherein the film has a multilayer structure that consists of three layers, the inner layer is the heat shrinkable film (*See col. 1, ll. 6-27 and col. 2, ll. 43-50.*), however, fail to expressly disclose wherein the proportion of the thickness of the three layers is 1 to 30:98 to 40:1 to 30 (the total is 100).

However, it would have been obvious to one having ordinary skill in the art to adjust the relative thickness of the layers to the above values for the intended application since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Furthermore, it would have been obvious, through routine optimization and design choice to select the above proportions in order to provide a structure that meets the desired strength and performance.

Regarding claim 23, Matsui ('261), the admitted prior art and Lind ('715) teach the film discussed above and Matsui ('261) teaches wherein the multilayer structure consists of two layers, one layer is the heat shrinkable film (*See col. 1, ll. 6-27 and col. 2, ll. 43-50.*), however, fails to expressly disclose wherein the proportion of the thickness of the two layers is 5 to 95:95 to 5 (the total is 100).

However, it would have been obvious to one having ordinary skill in the art to adjust the relative thickness of the layers to the above values for the intended

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application since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Furthermore, it would have been obvious, through routine optimization and design choice to select the above proportions in order to provide a structure that meets the desired strength and performance.

Regarding claim 28, Matsui ('261) teaches a packaging label comprising the heat shrinkable film (*See col. 2, l. 9.*).

Regarding claim 29, Matsui ('261) teaches a container packaged with the heat shrinkable film (*See col. 2, l. 9.*).

Regarding claims 30-31, Matsui ('261), the admitted prior art and Lind ('715) teach the structure discussed above, however, fail to expressly disclose wherein the styrene type polymer having a syndiotactic structure as the component (B) has a syndiotacticity of at least 75% of racemic diad, or at least 30% of racemic pentad per claim 30 and wherein the styrene type polymer having a syndiotactic structure as the component (B) has a syndiotacticity of at least 85% of racemic diad, or at least 50% of racemic pentad per claim 31.

However, it would have been obvious to one having ordinary skill in the art to adjust the amount of racemic diad and racemic pentad to the above values for the intended application since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

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5. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Matsui et al. (US 6,841,261) in view of Applicant's admission of prior art at pages 2 and 3 and those locations noted above of the Specification (hereinafter referred to as "the admitted prior art"), Lind et al. (US 6,074,715) with evidence of Shiraki et al. (US 4,386,125) and Teranishi et al. (6,184,289).

Matsui ('261), the admitted prior art and Lind ('715) teach the structure discussed above, however, fail to expressly disclose wherein at least one of the outermost layers contains a rubber-modified polystyrene containing dispersed rubber particles having a volume average particle size of at most 2 μm , in an amount of from 0.1 to 10 mass %.

However, it would have been obvious to one having ordinary skill in the art at the time Applicant's invention was made to use said high-impact styrene to reinforce the film without adversely affecting the transparency. Furthermore, it would have been obvious to one having ordinary skill in the art to adjust size and amount of particles to the above values for the intended application since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Additionally, it would it would have been obvious, through routine optimization that the quantities discussed above would not adversely affect the transparency (*See col. 1, ll. 6-27 and col. 2, ll. 43-50.*).

Teranishi ('289) teaches rubber particles with the above dimensions and concentration for structures having optimal strength and transparency (*See col. 8, ll. 20-55.*).

Therefore, it would have been obvious, through routine optimization and design choice to select a rubber-modified polystyrene containing dispersed rubber particles for one of the outermost layers (*See col. 1, ll. 6-27 and col. 2, ll. 43-50.*) in order to provide a structure with optimal strength and transparency.

ANSWERS TO APPLICANT'S ARGUMENTS

6. In response to Applicant's statements (*See p. 10, para. 1 of Applicant's Paper filed 7/2/2009.*) that due to the length of Applicant's Specification Applicant refers to the PGPUB instead of the Specification as filed, it is noted that the specification as filed is before the examiner and not the PB PUB. Applicant also refers to the specification as filed when addressing the Board's decision. Applicant's references to the PGPUB are confusing. Applicant shall refer to the Specification of record and not the PGPUB.

7. In response to Applicant's statements (*See p. 11, paras. 3-4 of Applicant's Paper filed 7/2/2009.*) that the Board ignored the teachings of the prior art described at paras. 5-8 of Applicant's Specification (not the Specification as filed as discussed above), it is noted that the Board refers to Applicant's Specification for Applicant's admission that SPS is well known. Applicant does not precisely rebut this issue.

8. In response to Applicant's arguments (*See p. 12, para. 4 to p. 13, para. 3 of Applicant's Paper filed 7/2/2009.*) that Applicant disputes that Matsui ('261) generically teaches SPS because Matsui ('261) does not specifically state that its' PS is SPS, it is noted that just because Matsui ('261) does not specifically teach SPS this does not mean that Matsui ('261) does not generically teach SPS. Applicant does not present any persuasive evidence or analysis to support its' position. Furthermore, as discussed

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above Applicant admits that SPS is well known for films such as those in Matsui ('261) and claimed.

9. In response to Applicant's arguments (*See p. 13, para. 4 of Applicant's Paper filed 7/2/2009.*) that the Board's position that Reference Examples 20 and 21 do not teach the terms of component (A) but are rather happenstance, it is noted that since Matsui ('261) teaches PS and Applicant admits as prior art SPS for application into films such as those taught by Matsui ('261) it is obvious that such a film would have the properties of SPS which Matsui ('261) generically teaches.

10. In response to Applicant's arguments (*See p. 14, para. 2 to p. 15 para. 2 of Applicant's Paper filed 7/2/2009.*) that Matsui ('261) does not teach the limitations set forth in claims 9-14, because the prior art does not teach SPS or specifically disclose the claimed limitations, it is noted that the Board does not address these claims and the admitted prior art is newly cited above as teaching the claimed limitations. Furthermore, as discussed above, it would have been obvious to one having ordinary skill in the art to adjust the cited parameters to the claimed values for the intended application since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art.

11. In response to Applicant's arguments (*See p. 15, paras. 3-4 of Applicant's Paper filed 7/2/2009.*) regarding claim 15, it is noted that Applicant's arguments are persuasive and the rejection is modified accordingly.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brent T. O'Hern whose telephone number is (571)272-0496. The examiner can normally be reached on Monday-Thursday, 9:00-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Sample can be reached on (571) 272-1376. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Brent T. O'Hern/
Examiner, Art Unit 1794
September 9, 2009